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09/883,346	06/19/2001	Wen-Yi Kuo	105494	9643

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EXAMINER

LEVITAN, DMITRY

ART UNIT PAPER NUMBER

2662

DATE MAILED: 03/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/883,346

Applicant(s)

KUO, WEN-YI

Examiner

Dmitry Levitan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 9-13, 15, 16 and 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 9-13, 15, 16 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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Amendment, filed 02/23/06, has been entered. Claims 1-6, 9-13, 15, 16 and 18 remain pending.

Drawings

1. The drawings were received on 02/23/06. These drawings are approved.
2. In light of Applicant's amendment, the objection to the drawings has been withdrawn.

Specification

In light of Applicant's amendment, the objection to the specification has been withdrawn.

Claim Objections

In light of Applicant's amendment, the objection to the claims has been withdrawn.

Claim Rejections - 35 USC § 112

1. In light of Applicant's amendment, the rejection of the claims set in the previous Office action under the second paragraph of 35 U.S.C. 112 has been withdrawn.
2. Claims 2, 9 and 10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification does not provide sufficient details to enable a skilled in the art to make and use the invention because it does not adequately describe the following:

Claim 2 limitations, directed to resetting the power level to said first power level.

Contrary to this limitation, Fig. 6 of the current Application and the text on page 2 of the current

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amendment, require adjusting the power under the condition of claim 2. Examiner believes that the system according to the claim 2 will never reduce the power in its operation below the initial value, create a dramatic drop of the power when a sequence of failed transmissions is followed by a successful transmission and contradicts the operation of the disclosed system.

The specification does not provide enough details about the structure and operation of the elements associated with the above identified claimed features to enable one skilled in the art to make and use the invention without undue experimentation.

Claim Rejections - 35 USC § 103

3. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sarkar (US 2002/0167907 A1).

4. Regarding claim 11, Sarkar substantially teaches the limitations of the claim:

A method for controlling error rates (a method for achieving the required FER in system 30 on Fig. 2 [0063]), comprising:

Transmitting a first block of one or more frames at a first power level to target a first frame error rate (transmitting frame at power level, shown between t3 and t4 on Fig. 5 and [0071-0073] to achieve the target FER, wherein a first block comprising only one frame); and

Determining whether one or more first error conditions occurred (determining at step 104 of Fig. 7 if an error occurred [0077]); and

If at least one first condition occurred, transmitting a second block of second frames at a second power level to target a second frame error rate (transmitting a second frame at a second power level as shown between t2 and t3 on Fig. 5 and according to the power increase 106 on

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Fig. 7 and adjusting FER [0073]). Sarkar also teaches retransmitting the errored frames at a specified power level and error rate (using same energy level for transmission and retransmission as shown on Fig. 4 and [0069-0070]).

Sarkar does not teach combining the next frames with the retransmission frames into one block, wherein next frames and retransmitted frames are transmitted at the same power and target the same error rate.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add combining the next frames with the retransmission frames into one block, wherein next frames and retransmitted frames are transmitted at the same power and target the same error rate to the system of Sarkar to simplify the system design, by avoiding separate power levels for next frames and retransmitted frames.

5. Regarding claim 12, Sarkar teaches;

Determining whether one or more second error conditions occurred (determining at step 104 of Fig. 7 if an error occurred [0077] for a third frame);

If at least one second condition occurred, transmitting a third block of third frames at a third power level to target a second frame error rate (transmitting a third frame at a third power level as shown between t1 and t2 on Fig. 5 and according to the power increase 106 on Fig. 7), wherein the third frame contains at least one second frame associated with one or more second error conditions (see claim 11 rejection above), and

If no second condition occurred, transmitting a third block of third frame at the first power level (transmitting a third frame at a first power level as shown between t3 and t4 on Fig. 5 and according to the power decrease 108 on Fig. 7, returning to the previous power level).

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6. Claims 1, 2, 11, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vanghi (US 6,711,150 in view of Malkamaki (US 5,563,895).

Regarding claims 1, 2, 11 and 13, Vanghi substantially teaches the limitations of claims 1, 2, 11 and 13, as a method and an apparatus for transmitting signal frames (1:30-40), comprising:

Generating a frames block i that includes k of said incoming signal frames, where i is an integer index (transmitting inherently generated data burst, comprising n frames, as shown on Fig. 2 and 5:26-44),

Transmitting frame blocks i with a first power level (the power level defined by the targeted FER, wherein the power control is set to achieve the target FER 4:56-5:5),

Determining whether said step of transmission failed to correctly transmit j signal frames of said block I (identifying if the frames 1 and 2 from n frames of the burst of Fig. 2 were received correctly 5:44-50),

When said step of determining concludes in affirmative (frames 1 and 3-n are not received correctly 5:46-49),

Retransmitting the failed frames j with a power level that is higher than the power level employed in the previous step of transmitting (retransmitting incorrectly received frames 1 and 3-n 5:52-55, wherein the power of the transmission is increased by of the outer loop power control based on the received frame quality 5:63-6:39),

Incrementing i and returning to the determining step (inherently repeating the process to transmit all the bursts of the signal transmission 1:12-30).

When the determining step concludes in negative (frame 2 is received correctly 5:45-50),

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Adjusting the power level, incrementing *i* and returning to the generating step (decreasing the power of the transmission by of the outer loop power control based on the received frame quality 5:63-6:39).

Vanghi does not teach generating a frame block combining the *j* incorrectly transmitted frames with subsequent incoming signal frames.

Malkamaki teaches generating a frame block combining the *j* incorrectly transmitted frames with subsequent incoming signal frames (combining new information and information for retransmission in one block, as shown on Fig. 4 and 8:39-46).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add generating a frame block combining the *j* incorrectly transmitted frames with subsequent incoming signal frames of Malkamaki to the system of Vanghi to improve transmission speed of the system, as combining new and failed frames in one block will reduce the system delay by reducing overhead in transmission and acknowledgement of these frames.

In addition, regarding claim 13, Vanghi teaches a wireless transmitter, shown on Fig. 1 and a monitor, inherently part of the transmitter on Fig. 1, because the monitor operates as disclosed above in the rejection of claim 1 and Malkamaki teaches a reformatting circuit, inherently portion of transceiver on Fig. 5 and 8:47-9:10, because it is essential for performing the reformatting circuit function as disclosed above in the rejection of claim 1.

7. Regarding claims 3 and 6, Vanghi teaches the system as a CDMA network (Title and 1:5-30) and the incoming signal frames are portions of the signals of the CDMA network.

8. Regarding claims 4 and 15, Vanghi teaches using acknowledgement messages to confirm the sender that the information sent was received correctly (acknowledgements for the entire

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message/segment of frames 1:40-54 and inherently portion of the system on Fig. 1 to generate them).

9. Regarding claims 9 and 10, Vanghi teaches correlating the power levels to the frame error rates and adjusting the power level to achieve the appropriate FER (nonlinear relations between power control and FER and adjusting power control to achieve desired FER 4:57-5:5).

10. Regarding claim 18, Vanghi teaches the second FER lower than the first FER (reducing FER/MER for k message compared with its value for k-1 message as shown on 8:1-17).

11. Claims 5 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vanghi in view of Malkamaki.

Vanghi in view of Malkamaki teaches all the limitations of claims 1, 3, 4, 13 and 15 (see claims rejection above).

Vanghi in view of Malkamaki does not teach the acknowledged segments as TCP segments.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the acknowledged segments as TCP segments to the system of Vanghi in view of Malkamaki to improve the system by utilizing widely used TCP standard, making the system compatible with numerous TCP operated devices.

Response to Arguments

12. Applicant's arguments filed 02/23/06 have been fully considered but they are not persuasive.

On page 9 of the Response, Applicant argues that Sarkar does not teach blocks of frames, as claimed in claim 11.

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Examiner respectfully disagrees.

Claim 11 limitations are directed to “a first block of one or more first frames”, therefore a single frame of Sarkar will satisfy claim 11 limitations and will constitute a block.

On page 9 of the Response, Applicant argues that combining into one block the transmission of second frame and retransmission of the failed first frame of Sarkar is not obvious.

Examiner respectfully disagrees.

Sarkar teaches adjusting the power level to achieve a target FER for the current channel condition. Therefore the power adjustment for all next transmitted frames, including the retransmitted frames, is the same, because the channel conditions for these frames is the same. Transmitting two frames: next and retransmitted, in one block will simplify the system design and increase the speed of the transmission.

Regarding Applicant's remarks directed to the power levels E1 and E2 in comparison with E0, Examiner did not use E1 level relations against E2 level in the rejection.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dmitry Levitan whose telephone number is (571) 272-3093. The examiner can normally be reached on 8:30 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (571) 272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DL

Dmitry Levitan
Patent Examiner.
3/8/06

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